Proceedings of the YOUTH MOUNTAIN FORUM 2018

22 October 2018
Bishkek, Kyrgyzstan

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Presentations: per authors
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About Mountain Societies Research Institute (MSRI)

Mountain Societies Research Institute (MSRI) operates at the intersection of academia and development. It strives for a future in which communities, government, academia, development practitioners and the private sector collaborate in the generation of inter and transboundary knowledge and its application for sustainable development in the mountain regions of Central Asia and beyond.

Situated in UCA’s Graduate School of Development, Mountain Societies Research Institute conducts research for development with the goal to improve the quality of life and wellbeing of the people and communities it serves in the mountain social-ecological systems of Central Asia.

MSRI has five key objectives:

- To generate knowledge on mountain regions and their societies through original scientific research;
- To serve as a knowledge hub for scholars from a wide range of disciplines, development practitioners, and policy makers;
- To enhance Central Asian capacities to conduct sound research relevant for mountain societies;
- To inform policy and practice through strategic engagement with key development partners and mountain stakeholders.
- To disseminate knowledge and lessons learned amongst the full range of mountain stakeholders.

MSRI’s core research themes include:

- Natural resource management and agro-pastoral livelihoods;
- Water-energy-food environment nexus, including food security;
- Mountain hazards and disaster risk management;
- Climate change, adaptation to climate change.

For more information, please visit: http://msri.ucentralasia.org/

About UNICEF Kyrgyzstan

UNICEF is a financial partner and a co-organizer of the Youth Mountain Forum 2018. UNICEF promotes the rights and well-being of every child, in everything that it does. Together with its partners, it works in over 190 countries and territories to translate that commitment into practical action, focusing special effort on reaching the most vulnerable and excluded children, to the benefit of all children, everywhere.

For more information, please visit: https://www.unicef.org/
YOUTH MOUNTAIN FORUM 2018

Introduction

The Youth Mountain Forum (YMF18) organized and carried out by UCA’s Mountain Societies Research Institute (MSRI) in partnership with UNICEF Kyrgyzstan took place on 22 of October in the State Museum of Art (Bishkek, Kyrgyzstan) as a side event preceding the World Mountain Forum 2018. Nineteen participants from 13 countries took part in an active discussion of climate change issues, generation of ideas and solutions toward a more sustainable future. The Youth Mountain Forum provided a unique platform for youth climate change ambassadors to present a collective voice on pressing issues of sustainable mountain development and generate further action to fight climate change and promote adaptive responses to the global issues posed by climatic changes. The Youth Mountain Forum culminated in the development of a “Call to Action” outcome document and generation of key messages announced during the opening of the World Mountain Forum by a Youth Forum representative, Alidovar Sodatsairov of the University of Central Asia (Khorog, Tajikistan). Youth Mountain Forum was attended by distinguished guests and representatives of the State Agency for Environmental Protection and Forestry (SAEPF), University of Central Asia and UNICEF Kyrgyzstan. A keynote speaker, Jake Norton—a world renown climber, photographer, filmmaker, philanthropist and inspirational speaker charged the youth audience with inspiring messages of discovering a higher life purpose in climbing mountain heights of the World.

Each participant of the Youth Mountain Forum was tasked to deliver a presentation in TED-talk format in line with World Mountain Forum thematic tracks (Climate Change affecting Water and Energy in Mountain Areas; Poverty, Food Systems and Agrobiodiversity; Resilience and Transformation in Mountain Communities and Ecosystems; Investing in Mountains – Securing the Future) and draft two or three key messages contributing to sustainable mountain development as part of a joint message to the global audience attending the World Mountain Forum 2018. The first part of the forum aimed at collecting and sharing youth perspectives on global environmental and sustainable development issues and the second focused on generating key messages and finalizing the “Call to Action” output document. It was the first time ever that the Youth Mountain Forum took place in Kyrgyzstan, especially in the context of the sustainable mountain development and first time to be an integral part of the global World Mountain Forum platform.

Forum Summary

The Youth forum began with opening remarks from Ted Chaiban, director of the program division of UNICEF’s headquarters, followed by remarks from Eldiar Sheripov, deputy director (SAEPF) and Gulnara Djunushalieva, director (UCA, School of Professional and Continuing Education) concluding with Jake Norton’s inspiring keynote presentation. Following keynote speeches, Youth Forum participants proceeded with individual presentations to highlight pressing and current environmental challenges posed by climate change. Second half of the Youth Forum was dedicated specifically to elaborating key environmental messages to be
delivered to the World Mountain Forum. Messages generated and presented below represent a collaborative and shared vision of future policies and actions.

KEY MESSAGES:

- Policies and practices will be most successful if they **appeal to people’s hearts**, not just their minds

- **Indigenous communities** have developed local solutions, tried and tested over time, and their ancestral and current **knowledge should be preserved**, also incorporated

- **Women care for the family** and are key players in all aspects of community life and promoting wellbeing- needs elaboration/ merged with other key message

- **Both upstream and downstream communities** have impacts and derive benefits from the environment, both should be involved in **participatory ways** in planning- mention early warning systems for natural disasters- need for this in some countries

- Youth can play a powerful role in **sharing knowledge**, child-to-child and more widely

- **New opportunities** also may be found in global changes such as climate change, and these should be encouraged, e.g. with support especially to new **eco-entrepreneurs**

- Yet, environmental challenges still can push people to **migrate out** of difficult living environments, sometimes leading to further **marginalization** of the region with loss of people and know-how

- In nearly all aspects observed, the matter of **multiple scales** is apparent – requiring a deep and multi-dimensional study to adequately understand development dynamics

- Oftentimes, **multi-stakeholder and multi-disciplinary solutions** need to be found, sometimes also **transboundary solutions** e.g. with water pollution in rivers systems

- Communities, civil society, government administration and scientists **must all work together**, exchanging knowledge on mountain regions and co-developing solutions

- Investing in **local people and communities** including investing in cultural dimensions of development will encourage people and increase a sense of **local ownership** – key ingredients for sustainable development

- The value of **local languages** in terms of knowledge about mountain ecosystems and production systems has largely been ignored to date, this should be reversed – more must be done to keep mountain languages alive, and more broadly we should strive to ensure that the **intrinsic values** of both mountain ecosystems and cultures should be widely recognized, moving away from current dominant market-based discourses.
BISHKEK YOUTH DECLARATION/ Call to Action

We, who are gathered here today, representing global youth from all the major regions of the world, both women and men;

Meeting in the context of the Youth Mountain Forum 2018 in Bishkek, Kyrgyzstan organized and supported by UNICEF and University of Central Asia;

Having been inspired over the years and now actively serving as inspiration to others in each of our own lives, affected but also agents of change and actors in the fight against the climate change in our home regions, and also encouraged with many insights arising from presentations and discussions today;

We hereby, through the present Bishkek Youth Declaration, wish to express our concerns for the future as well as share our many diverse suggestions about what can be done – indeed, what must be done – and on which basis we have a growing vision that is emerging and strengthening.

While clearly recognizing the current, often disheartening environmental and development scenarios in the world, we nonetheless choose to remain focused on solutions – with their inter-connected environmental, inter-generational, socioeconomic, technical, spiritual, and other dimensions requiring that these are addressed not in isolation, but holistically.

As understood and expressed in different ways in all of our contributions today, and as will be elaborated further in the World Mountain Forum 2018 that will begin tomorrow here in Bishkek, Kyrgyzstan – we recognize that the impacts of climate change in mountain regions around the world are already acute and will continue to affect our lives and wellbeing - these issues must be actively addressed at their root. We equally recognize that the emerging challenges expressing themselves in a multitude of ways including effects on water, energy, food systems, wealth and poverty, etc. will require a range of adaptive responses from us so that we can live well within these new realities.

We believe that solutions we need to collectively provide for the future we want must address and incorporate the following:

We, the youth from mountain partnership countries, are aware that mountainous areas are one of the most vulnerable to adverse impacts of climate change. The ever-increasing number of climate change-related natural disasters and increased food insecurity are making our lives and livelihoods very vulnerable. The futures of the glaciers that contain the freshwater upon which all of us, and not just in the mountains depend upon are becoming increasing unreliable and uncertain sources of clean, fresh water. Climate-forced migration is on the rise, uprooting children and depriving them of opportunities and education. It is high time for all of us to stand by our beloved countries; we should raise our common and strong voices about such impacts at all levels.

We are clear about the need for larger transformations in our production systems and consumptions patterns to take place, as well as the need to promote both social and ecological resilience. Leaders and policy makers should hear our voices of concern and to invest strategically in mountain areas, including the safeguarding of biodiversity,
ecosystems and the services they provide for societies. This can be achieved by appealing to peoples’ hearts, through their spiritual, cultural and traditional connections to territories and natural heritage. Not just invest in infrastructure but to invest in capacitating all mountain communities.

We ask the Governments and development partners to strengthen the capacity of youth through investment in existing and new global, regional and national youth networks and create opportunities to utilize their full potential for evidence-based advocacy, climate action, and full participation in the climate governance. This should be catalyzed by the creation and support of knowledge sharing platforms amongst youths, and the opportunities to communicate youth perspectives to wider audiences, especially decision-makers.

We want climate change mitigation and adaptation funds to be more easily accessed by youth to enable youth led initiatives to assist the developing countries with emerging green initiatives, including new and innovative technology and equipment through grant funding rather than loans, so youth and children are not indebted in future. Moreover, the developed countries should mobilize climate change funds that can be invested in climate change adaptation activities as well as support the transfer of such technology.

Each ministry should allocate specific budget to address climate change challenges and work in a coordinated manner to address this cross-sectoral challenge. Special allocations and specific projects should be adopted to address the vulnerable communities, especially women, youth and children and those who are vulnerable and in need.

We, the youth of mountain regions of the world realize that, climate change is posing serious risks to lives, our countries and for the future of planet. The time for only talk has run out, we need to act now. We from the conference are committing to step forward with the following actions:

We will engage and mobilize youth, youth groups and networks to raise voices and action against the impacts of climate change and other drivers of environmental degradation in the present and in the future.

We will work with families, communities, Governments, NGOs, civil societies, private sector, academia, and other relevant stakeholders to work out local solutions to address the climate threats through effective mobilization and utilization of resources.

We will work together with the government to implement the National Adaptation Plans and the shift to a low carbon economy.

We, the adolescents and youth, commit ourselves– to change our habits, our choices, and the way we live our lives to learning with and teaching our families, friends, and others to conserve our natural resources and planet.

We will establish linkages with global youth networks and communities using digital and social media and other possible information technologies for sharing our experiences, challenges and learning on climate change adaptation and mitigation.
We are at a crossroads – both figuratively and literally. As here in Central Asia in times past, the Silk Road enabled the movement and meeting of people, goods and ideas, in this Youth Forum in Bishkek, Kyrgyzstan, we – 20 youth representatives from around the world – have met. We have shared and discussed ideas and agree that significant change is needed to ensure a sustainable future, both for us in the mountains and our downstream neighbors. We are one world. Investments are now being made, such as China’s Belt & Road Initiative aiming to increase connectivity again, as in times past. This is important, even essential – and the same principle applies globally. Here we wish to share with our peers, across the generations, the key elements that we believe must be incorporated into our actions.

In closing, we aim to be a responsible generation. We are determined. And because of this, we propose the above insights and solutions. The time for change is now.

During WMF opening, Youth messages were eloquently presented to the international audience by Alidovar Sodatsairov, UCA student from Khorog, Tajikistan.

“Honorable delegates, distinguish guests, participants, fellow youth friends and ladies and gentlemen, Asalamaleikum.

I am Alidovar Sodatsairov from Tajikistan studying in the University of Central Asia. I feel very privileged to be speaking in front of this august gathering representing the Youth. I was one of the 18 young people who have gathered during the Youth Mountain Forum that took place yesterday. The Youth Mountain Forum is a special event organized by the University of Central Asia in partnership with UNICEF Kyrgyzstan, which is a preconference side-event of the World Mountain Forum.

During the Youth Mountain Forum, we have written the Bishkek Youth Declaration in which we state what are for us the main challenges that mountains are facing and the possible solutions to fight these problems.

Our key messages are:

1. Communities, governments, academia, civil society including youth must all work together, exchanging knowledge on mountain regions and co-developing solutions. Often, multi-stakeholder and trans-disciplinary solutions need to be found including transboundary solutions.

In nearly all aspects observed, the matter of multiple scales is apparent – requiring a deep and multi-dimensional study to adequately understand development dynamics.
2. At the local level mountain communities have developed solutions, tried and tested over time, therefore, the indigenous and traditional knowledge should be preserved and incorporated into global development programmes. For instance, more must be done to keep mountain languages alive and to ensure that the intrinsic values of both mountain ecosystems and cultures are widely recognized.

3. New opportunities also may be found in global challenges such as climate change, and these should be encouraged through sustainable and eco-friendly initiatives

4. Vulnerable groups should be targeted since the effects of climate change on people might depend on their age, gender, ethnicity, sexual orientation among others.

Climatic and other changes can push people to migrate out of the land they value and are attached to, and this is why we should appeal to everyone’s heart in order to bring changes.

This was the youth call for action. If you ask who is youth? Youth has YOU in it.

Thank you! Rahmat!"

Keynote Presenters

Sonam Wangchuk is a mechanical engineer, innovator and education reformist. Working in his native Ladakh, Sonam has taught innovation at the SECMOL Alternative School, and together with his students, designed and built low-cost solar heated buildings. In 2013, in response to the growing issue of climate change, Sonam created the Ice Stupa project, which creates artificial glaciers to store water in winter, releasing melt water in summer months and preventing water shortages.

Jake Norton is a world-renowned climber, photographer, filmmaker, philanthropist, and inspirational speaker. Based in Evergreen, Colorado, Jake’s worldwide adventures have taken him to the summit of Mount Everest (three times) and on expeditions on all seven continents. He is an Ambassador– for the United Nations’ Mountain, and in this role he advocates on behalf of mountains, mountain environments, and mountain peoples.
YOUTH FORUM SESSIONS

Prakriti Koirala, Nepal

Climate Change Affecting Water and Energy in Mountainous Areas

-Prakriti Koirala
Environmentalist
Nepal

Mt. Everest, the highest peak of the World

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Glacial Lake
Proceedings of the YOUTH MOUNTAIN FORUM (Bishkek, Kyrgyzstan: 22 October, 2018)
Biao Affo, Togo

Climate Innovation Lab TOGO (CIL TOGO), Platform for Green innovations support

Presented by
Biao AFFO, M Eng

Environmental Engineer
Founder of Climate Innovation Laboratory TOGO (CIL TOGO)

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2018

PRESENTATION PLAN

- SUMMARY
- PROBLEM
- SOLUTION + VALUE PROPOSITION
- WHAT WE’VE DONE
- PROJECTIONS (FUTUR)
Presentation of CIL TOGO founder!

Biao AFFO is an environmental engineer with relevant experience in the field of environmental protection, particularly in sustainable forests management and natural resources, digital mapping and Geographic Information Systems.

- Co-Founder and General Secretary of the West African Observatory for Sustainable Development (OADD)
- "Climate Organizer" (country representative) in Togo for Ecopreneurs4Climate (Partner of CIL TOGO), an international non-profit organization promoting green entrepreneurship
- Consultant, Environment Specialist for the Documentation and Training Center on Human Rights (CDDH)

Biao holds a Master of engineering degree in Natural Resources Ecology and Management and a Bachelor of engineering degree in General Forestry from the National Forest School for Engineering (ENFI) of Rabat-Salé (MOROCCO).
- Alumnus of the Young Africans Leadership Initiative (YALI) Emerging Leaders Program of the Regional Center of Accra (GHANA) on the "Entrepreneurship" Axis

Geographic Situation : Togo (Africa)
CLIMATE INNOVATION LABORATORY TOGO (CIL TOGO)

Platform for promoting and supporting eco-innovative climate change adaptation and mitigation initiatives and the best projects of eco-entrepreneurs and young people to solve the environmental challenges faced by Togolese communities and businesses.

Vision

Make Climate change, an opportunity for profound regeneration towards a more inclusive, fair and sustainable economy in Togo and the West African Sub region.

Why? Problem!

- Environmental issues in communities and businesses (waste management, water, energy efficiency, mobility and transport ....)
- Low coordination of adaptation (mitigation) actions against climate change
- Youth unemployment
How? Solution/Value Proposition: CIL TOGO!

It is a Climate Platform where young people bring solutions to the environmental challenges of companies, communities in Togo,...

Organization of Climathons are said to solve the internal challenges related to the climate of large companies (private financing) around strategic sectors such as energy, water, waste, mobility, ...

It is a 2-days activity that will be used to mature an idea responding to a specific challenge to achieve a concrete solution or business project that can be developed through internships in companies concerned or incubated until the stage of startup in high impact potential.
How? Solution/Value Proposition: CIL TOGO!

Our value proposition is to identify innovative climate projects, engaged in open co-creation processes to address climate challenges, frame the best green projects and provide businesses/projects with a “Green Star” rating based on their ecological footprint.

Our project is to address business and community climate challenges around strategic sectors such as energy, water, waste management and mobility that impact the environment, orienting businesses towards sustainability and really help grassroots communities, through local solutions help them to adapt and be resilient.

CIL Togo offers support and networking services to green economy stakeholders, providing information on the national and international climate technology market, offering seminars/trainings as well as consulting services and environmental strategic support.

Who? Targets!

- Aspirants eco-entrepreneurs (Young, Women),
- Green SMEs,
- NGOs and Enterprises (including eco-innovation and/or aspiring to sustainability)
Demonstration: Activities Held

- Green Entrepreneurship 'ECO4CLIMATE' Forum
  - Government (Environment ministry, FAIEJ, …)
  - NGOs,
  - Businesses (Green SME),
  - Green Projects holders
  - Medias
  - Students

- Green Entrepreneurs Cartography: Women (12%)

- Young Women Academy on Green Entrepreneurship

- Regular sessions/trainings on Green and Social Entrepreneurship

Keys Results/Impacts

- + 380 young people and women trained on green jobs opportunities / green entrepreneurship and technical support mechanisms and financing of green projects;

- 11 project leaders presented their projects and promoted on medias received personalized support resulting in 5 green SMEs;

- Partnerships with ECO4CLIMATE, public institutions, NGOs, Incubators
FUTURS PROJECTIONS

In the first five years, CIL TOGO is expected to create more than 50 viable climate businesses, generating some 3,200 direct and indirect jobs.

Over the next decade, it is estimated that more than 20,000 jobs will be created in Togo and 1,74 Mega tons of CO2 will be mitigated by the innovations and technologies that will be supported by CIL TOGO.

CLIMATE INNOVATION ECOSYSTEM

- Mapping of the stakeholders (Public, Private, civil society, international organizations) of this ecosystem;
- Investigation into the characteristics of the Green Entrepreneur in Togo: Information, motivations, challenges encountered that will allow to have a database of green entrepreneurs;
- Establishment of an efficient and adapted system in Togo to evaluate the ecological footprint of activities impacting the environment (Providing a rating of one star to five stars);
- Regular after Works’ on Climate Innovation for sharing experiences among industry players and facilitating networking;
- Organization of Forums on Climate Technologies and Innovations to promote disruptions that solve environmental challenges and to change the policies that govern the sector;
WHY NOYON MOUNTAIN IS IMPORTANT?

Noyon Mountain is located in the Mandal Soum of Selenge Aimag in Mongolia and itself is permafrost and forest resource and source for many rivers including the Kharaa and Erego. It represents 6% of the total land area of Mongolia.

The Selenga River is the largest source feeding Baikal Lake, supplying 50% of the water flowing into the lake.

Noyon mountain is the source for forming aquifers and permafrost and forest resources.

Ground Depth

Twelve natural water aquifers in the Orkhon River Basin are sourced from the Noyon Mountain. The Kharaa, Erego, and Boroo Rivers, which are all sourced from the Noyon Mountain, join the Orkhon River, and the Orkhon is a tributary to the Selenga River, which together form the primary river network in Mongolia.

Baikal Lake is the deepest fresh water lake and the largest fresh water resource on earth. Holding 20% of fresh water in the world.
FROM WHAT
WE SHOULD
PROTECT?
HOW
WE CAN DO IT?
Man and nature in the conditions of Turkmenistan

- Due to the fact that man is an integral part of nature environment (lithosphere, hydrosphere, biosphere, atmosphere and others) is closely interrelated with the process taking place, and he himself influences these processes to some extent.

Ecological policy of Turkmenistan

- The signing and ratification by an independent neutral Turkmenistan of various UN conventions and Protocols on the protection of the environment is an important event.
- Turkmenistan has ratified and became a supporter of eleven international conventions and UN programs with various aspects of environmental protection.
The decree "On the accession of Turkmenistan to the conventions of the World Meteorological Organization was signed on November 6, 1992. The Montreal Protocol on substances that Deplete the Ozone Layer is being successfully implemented. Turkmenistan signed the United Nations Framework Convention on climate change in 1995. Turkmenistan was one of the first in 1996 to accede to the UN Convention to Combat Desertification. 1998 ratified it and signed the Kyoto Protocol. 1999 adopted the Green belt project.

In connection with these conventions for the development of knowledge on ecology in Turkmenistan, the subject of "Nature Management" is being studied from 3rd to 5th grade, and in 10th – 11th classes, the subject of the basic of ecology. The subject is based on a systematic approach for the formation of a systematic perception of the world in a child in all its variety of forms and interdependences (between the natural environment, the economy and society)
Climate change affects some of the most fundamental prerequisites for health, such as food, water and air.

Climatic conditions of Turkmenistan

- Due to the location of Turkmenistan in the desert zone of the temperature zone its climate is extremely continental and dry.
Air

- Air pollution is determined by the level of natural and anthropogenic influence. High temperatures and significant lack of air humidity, rapid drying of the topsoil and high wind speeds contribute to the dustiness of the atmosphere throughout Turkmenistan. Therefore among the air pollutants by mass, dust of a natural nature prevails.

Combating air pollution in Turkmenistan

- According to the Green Belt Program more than 2 million saplings are planted in Turkmenistan every year.
As a result of landscaping, outskirts of cities and villages turn into green areas

Work on the improvement imgated land and water resources in Turkmenistan

- In 2000, with the aim of collecting the drainage water available in the country, the construction of the Turkmen Lake "Altyn Asyr" (golden age) began, and is currently commissioned.
The size of the lake is 103 km long and 18.6 km wide. The length of the main collector is 720 km.
What are we doing, young people?

- Every year UNICEF organizes training sessions for training young volunteers. Trainings are conducted by UNICEF trainers specifically for secondary school teachers and students. Trainings are held in order to prepare young volunteers for the dissemination of information that they received during the training.

Preparation games for volunteers
Information sharing volunteers in summer camps

Conducted trainings
- Trained volunteers across the country conduct training among students of school and pre-school ages. The purpose of the training conducted is to expand the outlook of children about nature, about its protection. And of course, greening the environment and improving
Appeal to reason...

* “On average, one tree produces nearly **120 kg** of oxygen each year. Two mature trees can provide enough oxygen for a family of four.”

* “…150-200 **species** of plant, insect, bird and mammal **become extinct** every 24 hours.”

Appeal to heart...

What appeals to people’s feelings, emotions and beliefs?
Sacred sites

...are areas of land and bodies of water which are spiritually and culturally significant for local people and where spiritual practices are performed (Aitpaeva 2013)
1176 documented sacred sites in Kyrgyzstan

Take-home messages

* Appeal to hearts...
* Identify the elements of nature-culture that appeal to people’s hearts
* And use these elements in conservation (with caution though)
Children are more susceptible to adverse environmental conditions and more sensitive to climate change. To reduce the burden on the environment, it is important that knowledge and skills be inculcated from an early age, so that everyone understands how important it is to take care of the environment and resources.

Man is one of the components of nature

Man is an only living organism capable of modifying its surrounding environment according to the need.
Why prioritise children

- Children are the least responsible for the causes of climate change and yet are the most vulnerable to its impacts
- Climate change presents numerous challenges to child development:
  - increased child malnutrition through changing agricultural yields;
  - greater risk of disease and death through the higher frequency and intensity of natural disasters;
  - the disruption of education due to natural disasters and forced migration

Child rights and climate change

- Climate change in the UN Convention on the Rights of the Child:
  - the right of a child to have his or her best interests be a primary consideration in all actions concerning him or her (Article 3)
  - the right to life; Governments should ensure that children survive and develop healthily (Article 6)
  - the right to the enjoyment of the highest attainable standard of health (Article 24)
  - the right to education (Article 28).
Climatic conditions of Turkmenistan

Climate risks in Turkmenistan

- Drought and Dusty storms
- Floods and Mudflows
- Desertification / Salinization
- Extreme changes in temperature
- Air / water pollution
Climate change affects some of the most fundamental prerequisites for health, such as food, water and air.

Turkmenistan’s Commitment on Climate Change

* signed and ratified UN Framework Convention on Climate Change
* signed and ratified UN Convention on desertification
* adopted the National Strategy on Climate Change (2012)
* signed and ratified Paris Agreement and Kyoto Protocol on Climate Change
Combating air pollution in Turkmenistan

According to the Green Belt Program more than 2 million saplings are planted in Turkmenistan every year.

Turkmenistan’s Commitment on Climate Change

* adopted Sustainable Development Goals (SDGs), including targets and indicators of Disaster Risk Reduction (DRR) and environment-related SDGs
* large infrastructure works to address water and land pollution
* greening populated areas to reduce the impact of air pollution
* investing in improved food production and water efficiency technologies
As a result of landscaping, outskirts of cities and villages turn into green areas.

Mainstreaming Climate Change in Education

Interrelation between learning and teaching

Inter-sectoral approach

Cooperation with parents and community

Engagement of children and increase their knowledge
Climate change mainstreaming. Role of Youth

- Step-by-step inclusion of climate change into teaching and learning process
- Joined 2 year initiative of the UNICEF, Ministry of Education, the National Red Crescent Society
- Development of educational materials on climate change, environment and energy
- Awareness raising and child resilience activities
- Engagement of parents and communities in DRR activities

What are we doing, young people?

Trainings for young volunteers
Disseminating information to the community
Community level awareness raising by youth

1. Community outreach activities
2. Conducting after-school activities for the interaction of children with the environment
3. Practical application of education materials learned
4. Strengthening youth skills and knowledge

Climate Change Campaigns
Go Green Festivals
Green Schools Concept
Activities in summer camps: competitions, quizzes, craft-making by using recycling materials

Adopt and modify the environment

- Don’t disturb the nature
- Conserve water, energy
- Grow more trees
- Reuse, Reduce, Recycle
- Use renewable resources
- Save electricity
Each of us should make our own contribution to combat climate change. And we can start from our home, school, community.

Let's act for our planet.

Calderon Karla, Peru
25%
8 000 000
living in the mountains

If you don't know where you've come from, you don't know where you're going.

African proverb

5 years old
Karla Calderón
Huaraz
WE DON'T LIVE THERE ANYMORE

We lost our animals because of the low temperatures
Our agriculture stopped being profitable...

Illegal mining contaminated our water sources.
Influence of Livestock Farming on Vegetation

And unfortunately our economy is based on...

- 4% Fishery and Aquaculture
- 3% Oil extraction, gas and mineral
- 5.8% Commerce, Infrastructure
- 5% Agriculture and livestock
- 6% Electricity, gas and water
What are some of the ways sustainable economic growth can be achieved?

What do we need to change?
The Role of Education for Sustainable Development

Understanding and modeling sustainability practices...
Recovering ancestral farming techniques to combat climate change

Long-Term Research in Mountain Areas
Reducing meat consumption is one approach that can help with food sustainability and security.

Promote sustainable business models.
Create the network of ambassadors
"Securing the future of the mountains"

Our past has written our present. It's time to write our future
Camila Flores, Ecuador

17,099,844
283,000 km²

**Strengths and weaknesses of Mountain Communities in Ecuador, South America**

**Chimborazo**

Highest mountain and volcano in Ecuador
6,268 m

**Baltazar’s life**

Photo: Cuenca High Life

Photo: Josef Schraeblinger
Ecuadorian Andes
22 principal mountains higher than > 3500m

Mountain Ecosystem Services
1. Provision
2. Cultural
3. Regulating

Mountain Communities

Critical stressors mountain communities:

Lack of technical education and community relationships

What do we need?
Promote technical and environmental education

Strengthen Mountain Community Relationships

Scientists
Mountain community members
Mountain community leaders
Politicians
Urban population

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Process to achieve sustainable development at mountain communities

- Develop technical and environmental education methods
- Promote connections of rural and urban population
- Join efforts of mountain communities members

Productive, sustainable and biodiverse territory, for the benefit of the communities.

Inclusive education: forest school

Different communities such as: the area of conservation and sustainable use Yunguilla.
Charlotte Upenyu Chitambo, Zimbabwe

Importance and Potential

• Investing simply means seeing the extraordinary in a seemingly ordinary thing.
• It’s important to invest in mountains because they hold tremendous potential.
• Investing in mountains ensures that this potential is realized
• It is therefore imperative to safe-guard the ecosystem’s integrity because mountains are a source of numerous environmental and ecosystem services.
Ecosystem Services from Mountains

• Mountains contain much of the world’s forests.
• Mountain agriculture provide subsistence for half billion people globally.
• Crop diversity is made possible by agriculture, as well mountain ecosystems important for genetic resources.
• Mountains key habitat for much of world’s flora and fauna.
• Rivers forming in mountains supply half the global population with water resources.

Types of Investment

• This however, does not mean in terms of infrastructural investments, but there is great need for institutional investments.
• We do not expect to have a McDonald’s erected in our mountains.
• Investment would provide guidelines and policies that emphasizes mountain conservation.
• Offering the safeguarding of spectacular landscapes, diversity of species, water towers and the general mountain ecosystem biodiversity.
Mountain Communities

- Important to invest in community, especially youth.
- Providing communities with opportunities and experience to help communities benefit from the services offered by the mountains.
- Community engagement ensures sustainable implementation of these measures.

Connection to Mountains

- Community focus encourages ownership over mountains by local communities.
- These groups can opt to ‘adopt’ mountains providing local communities with the responsibility of resource management.
- For these connections to be understood it is vital to know about the history of these mountains.
Nyanga Mountains

- During the early centuries when the Bantu people were moving south to settle the plateau which they called Guruswa, which was inhabited by the Barwe, Machipunda, Wateve.
- They were ruled by Makombe of the Humba totem. Makombe’s daughter got married to Muchachani of the Simboti totem. Muchachani was a healer with supernatural powers.
- Makombe wanted protection from Muchachani’s prowess and therefore gave a part of his country - the Ndume or present day Nyanga Mountain.

Tale of the Spirits of Nyanga

- The sacred Nyanga is the most popular sacred areas under the Nhando territory.
- Firakutumwa, who was popularly known as Mufambanhando or simply Nhando, was a warrior who would go away to fight wars in the plateau and return to Nyanga.
- But as fate would have it, Nhando was betrayed by his friend Sinyoro and died.
- He was buried in the Chikapakapa mountain range.
- Mutasa, Nhando’s nephew, knew of his uncle’s magical stick and connived with others to take away Nhando’s area of jurisdiction.
- Thus, Nhando’s descendants lost their chieftainship and were all driven away from the mountain.
- However, despite losing the chieftainship a century ago, Nhando’s spirit has been waging a war to reclaim the area.
Spirits Continued

- Nhando’s medium proclaim:
  “I am saddened by this story. I am saddened because my children don’t have a place of their own. They are just refugees everywhere without a place they call their own. If you look closely, the water is drying up slowly. I won’t rest until my children reclaim what is theirs. People will continue to disappear in Nyanga mountain.”

Importance of Culture

- This history and these connections help us to understand the importance of mountains to local communities.
- Incorporating cultural elements helps to strengthen the communities’ bond to the mountains.
- A local folktale, local history, and local culture help to foster a relationship with the mountains.
- This helps ensure the mountains are cared for.
Benefits

- Connection to any area encourages use.
- Leisure activities are good for both local community engagement, as well as health and well-being.
- Developing a local culture for engagement with the mountains promote eco-tourism and adventuring in the area.
- Thus healthy living can become synonymous with a good hike in pristine mountains.
- ‘investors’ should also seize this opportunity to make mountains accessible and safe for visitors.

Conquer your local mountain before attempting Kilimanjaro or Everest!
Darlington Tshuma, Zimbabwe

Introduction

- I grew up in a predominantly rural community in Zimbabwe. I spent the greater part of my childhood and early teenage hood in an area called Matobo.
- Matobo lies in a high plateau area and is famous for its massive granite outcrops, boulders and wooded thickets that give a spectacular view to nature lovers.
- The hills are said to have been formed about two billion years ago. Geological transformation over the years has transformed the landscape into smooth ‘whaleback dwalas’ and broken kopjes strewn around making the area an attractive destination not only to tourists but also geology and geography students.

Cont’

- While nature lovers would naturally fall in love with Matobo’s rich cultural and archaeological heritage as well as its aesthetic nature, on the extreme end is the harsh reality of poverty, hopelessness and vulnerability of most households whose everyday reality is a struggle for survival.
- For example, a World Bank and Unicef study found that Matobo had overall poverty rates of 76.6 percent (World Bank and Unicef 2015)
- Out of the 20 427 households that make up the district, 15 518 were at risk of food insecurity as at 2015 (ibid).
- The rugged topography of Matobo, its limited agricultural output and a harsh climate makes the area one of the least habitable places in Zimbabwe.
Matobo District in Zimbabwe

- Zimbabwe is an agro-based country and agriculture contributes about 60 percent of the country’s GDP and employs over 60 percent of the population, mostly women and youths. Mountain areas like Matobo are disproportionately affected by poverty and food insecurity.

- While poverty rates and food security have generally improved over the past decades, places like Matobo have recorded high rates of poverty and food insecurity resulting in increased vulnerabilities associated with climate change, deteriorating local food systems, loss of agricultural biodiversity and degradation of mountain ecosystems.

Cont’

- These changes have necessitated changes in the production and consumption habits of poor households. The resultant effects of these changes are low calorie intake and high incidences of malnutrition and undernourishment, particularly among the 0-5 year age group.

- Harsh conditions further drive out young people, creating a development gap that further plunges communities into deeper cycles of poverty and vulnerability.

- A study by FAO, shows that about 329 million people living in mountain areas are vulnerable to poverty and food insecurity. This vulnerability increases as one moves into rural areas; with one in every two people at risk of food insecurity.
What needs to happen going forward?

- In light of these challenges, there’s need for coherent and multipronged approaches to addressing the vulnerabilities and insecurities associated with mountain societies.

- Enhancing the resilience and adaptive capacities of mountain societies in view of potential stressors and shocks is key to achieving sustainable development, poverty alleviation and improving food security.

- More importantly; given that young people are the most impacted by these changes, there’s need for comprehensive development approaches that tap into the needs, aspirations and experiences of young people living in mountain societies. Young people, networks and organizations that represent them are crucial in policy formulation and development.

Yujie Gan, China
The New Silk Road (OBOR)

40 countries
3 billion people
Silk Road Economic Belt
21st Century Maritime Silk Road

Core Chinese areas involved

At least 13 Chinese provinces and regions, as well as one municipality are expected to be active participants in China’s “one belt, one road” concept. The land and maritime routes connect many land and sea ports across three continents.

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Proceedings of the YOUTH MOUNTAIN FORUM (Bishkek, Kyrgyzstan: 22 October, 2018)
Central Asian Rail Infrastructure

But our understanding is dependent on LANGUAGE

Culture-Nature dichotomy
Species-oriented

Biodiversity
Biodiversity.fi
PHILIPPINES

110 ethnolinguistic groups
RESILIENCE AMONG THE DUMAGAT IN SIERRA MADRE, PHILIPPINES

- Access to education
- Relearning the Dumagat language

Biocultural diversity and resilience

Photos: Benedict Ranes

Photos: Jacob Maenc
Alidovar Sodatsairov, Tajikistan

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Angela Sofia Soriano Quevedo, Peru

GENDER & CLIMATE CHANGE IN MOUNTAIN AREAS
Gender-sensitive approaches and tools’ for understanding and assessing impacts, vulnerability and adaptation to climate change refer to methodologies and practices applied to ensure that both men and women’s concerns, aspirations, opportunities and capacities are taken into account in all climate change adaptation activities, including assessments, planning, implementation, monitoring and evaluation and technology development.

Source: FCCC/TP/2015/11

OPPORTUNITIES & CHALLENGES OF GENDER-SENSITIVE APPROACHES FOR ADAPTATION

OPPORTUNITIES
- Catalyzing of adaptation actions that recognize and integrate the different knowledge and roles of men and women
- Empowerment of women and the creation of a win-win situation
- More resilient, accepted and efficient policies and practices

CHALLENGES
- Limitations associated with social and cultural context
- Limited resources, including finance, technical and institutional capacities at all levels
- Lack of comprehensive and consistent application throughout the adaptation planning and design cycle
Nejat Malikyar, Afghanistan

Improving Community Livelihood through Integrated Knowledge
A Sustainable Development Approach to Ensure Conservation in Mountain Communities

Integration of Religious, Traditional and Modern Knowledge (A holistic Approach)

Combination of these knowledges can be bases of collaboration to strengthen the technical plans and programs for Sustainable Mountain Development
The environment is the second victim after human loss in Afghanistan

Out of 3 per cent natural forest, 1.9% is lost and the trend is still going on……

Between 1980 to 2015 from every 1 million inhabitants, 1,150 people die in Afghanistan, 50% of these fatalities from geophysical and weather related events.
Unimaginable difficulty conservationists faced during Taliban and Mujahedin era to save our environment

Climate Change Refugees
SEA Sustainable Mountain Development Approaches

We did climb down but we do climb up again
Save the Environment of Afghanistan
Planning Team/UCA:

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Emslie-Smith, Matthew – Junior Research Fellow, MSRI/UCA

Invited Guests:

Sheripov, Eldiar – Deputy Director, State Agency for Environmental Protection and Forestry (SAEPF)
Salykmambetova, Baglan – Head, International Relations Department, State Agency for Environmental Protection and Forestry (SAEPF)
Barieva, Aizada – State Agency for Environmental Protection and Forestry (SAEPF)
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Mokuo, Yukie – Representative, UNICEF Kyrgyzstan Country Office
Mammadzade, Munir – Deputy Representative, UNICEF Kyrgyzstan Country Office
Turusbekov, Esenbek – Climate Change Specialist, UNICEF Kyrgyzstan Country Office
Dzhaparova, Mavluda – Communications Officer, UNICEF Kyrgyzstan Country Office
Osmonova, Munara – UNICEF Kyrgyzstan Country Office
Norton, Jake – Professional climber, guide, photographer, inspirational speaker
Ekpe, Sonigitu – Acting Deputy Director (Scientific), Ministry of International Development Cooperation, Nigeria
Mishra, Udayan – ICIMOD, Nepal
Emslie-Smith, Matthew – Junior Research Fellow, UCA
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Charlotte Upenyu Chitambo – Africa Care Creation, Zimbabwe
Biao Kokou Ayé Affo – Climate Innovation Laboratory, Togo
Darlington Tshuma – PhD Researcher, Zimbabwe
Clarissa Ruizol – University of the Philippines, Philippines
Prakriti Koirala – Bachelors in Environmental Science, Nepal
Babayev Begench – School #24, Turkmenistan
Soyunhanov Ovezmuhammet – School #23, Turkmenistan
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Yujie Gan – University of Oxford, Smith School of Enterprise and the Environment, China
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